Chesapeake Bay Program

A Watershed Partnership

Protecting and Restoring the Chesapeake Bay:

An Overview of Executive Order 13508, the Bay TMDL and Regulatory Initiatives

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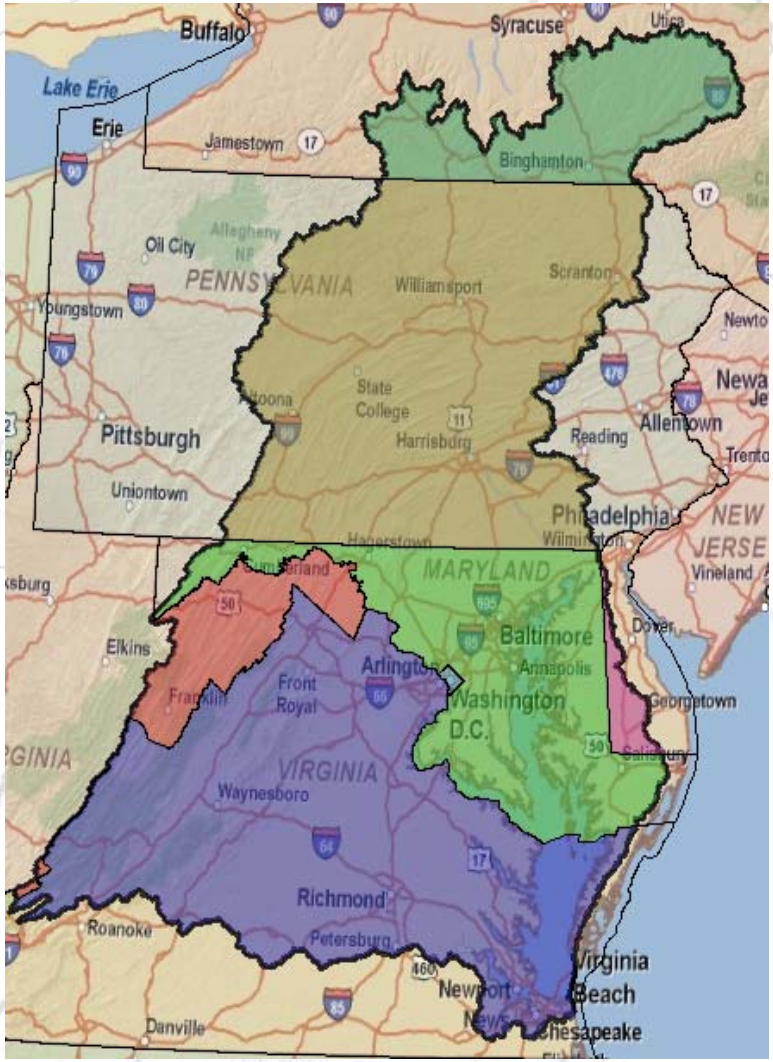
Overview

- Health of the Bay/Water Quality
- "Bay TMDL"
  - A New Accountability Framework
  - Watershed Implementation Plans (WIPs)
  - Consequences
- Chesapeake Bay Executive Order
- Regulatory Initiatives and Guidance
- Questions, comments, discussion

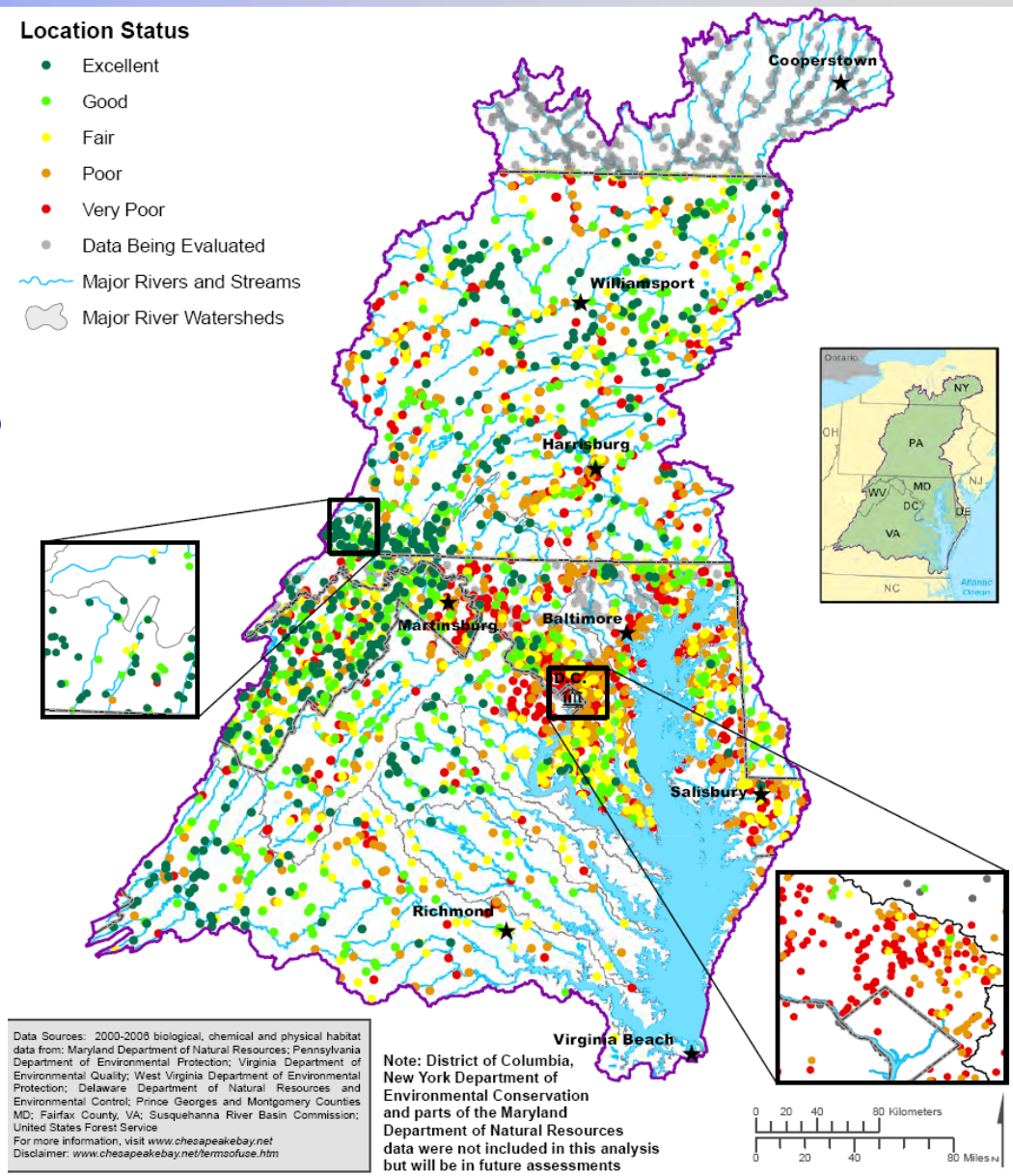
The Chesapeake Bay and Watershed

- Largest estuary in North America and the third largest in the world.
- Land-to-water ratio is 14:1; largest of any coastal water body in the world. Average depth of 21 feet.
- Supports more than 3,600 species of plants, fish and animals
- Home to almost 17 million people. About 170,000 new people move into the watershed each year.
- Tens of thousands of streams, creeks, and rivers are resources for communities throughout the watershed.
- 77,000 principally family farms.



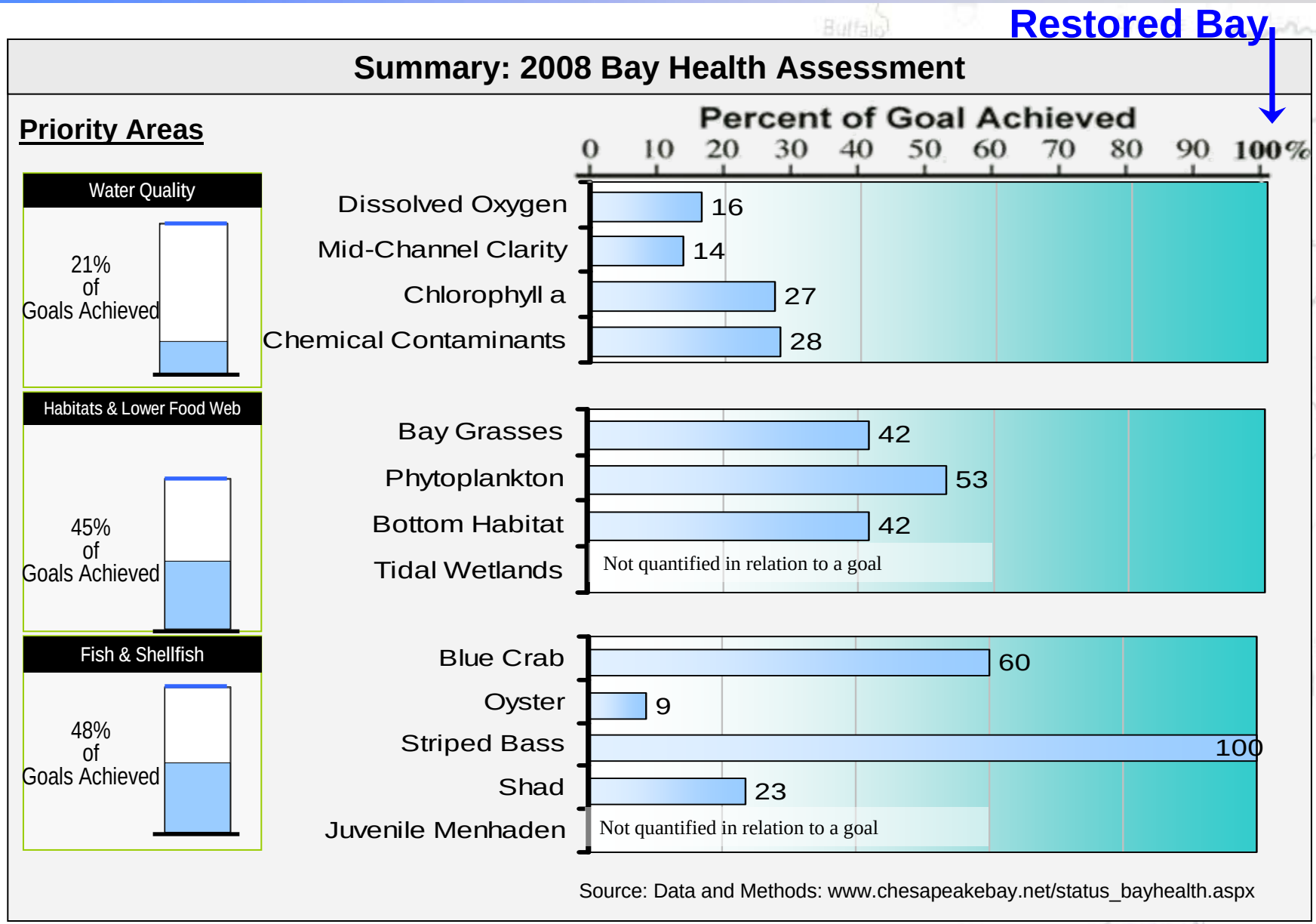
Health of the Chesapeake Bay

Health of Freshwater Streams in the Chesapeake Bay Watershed



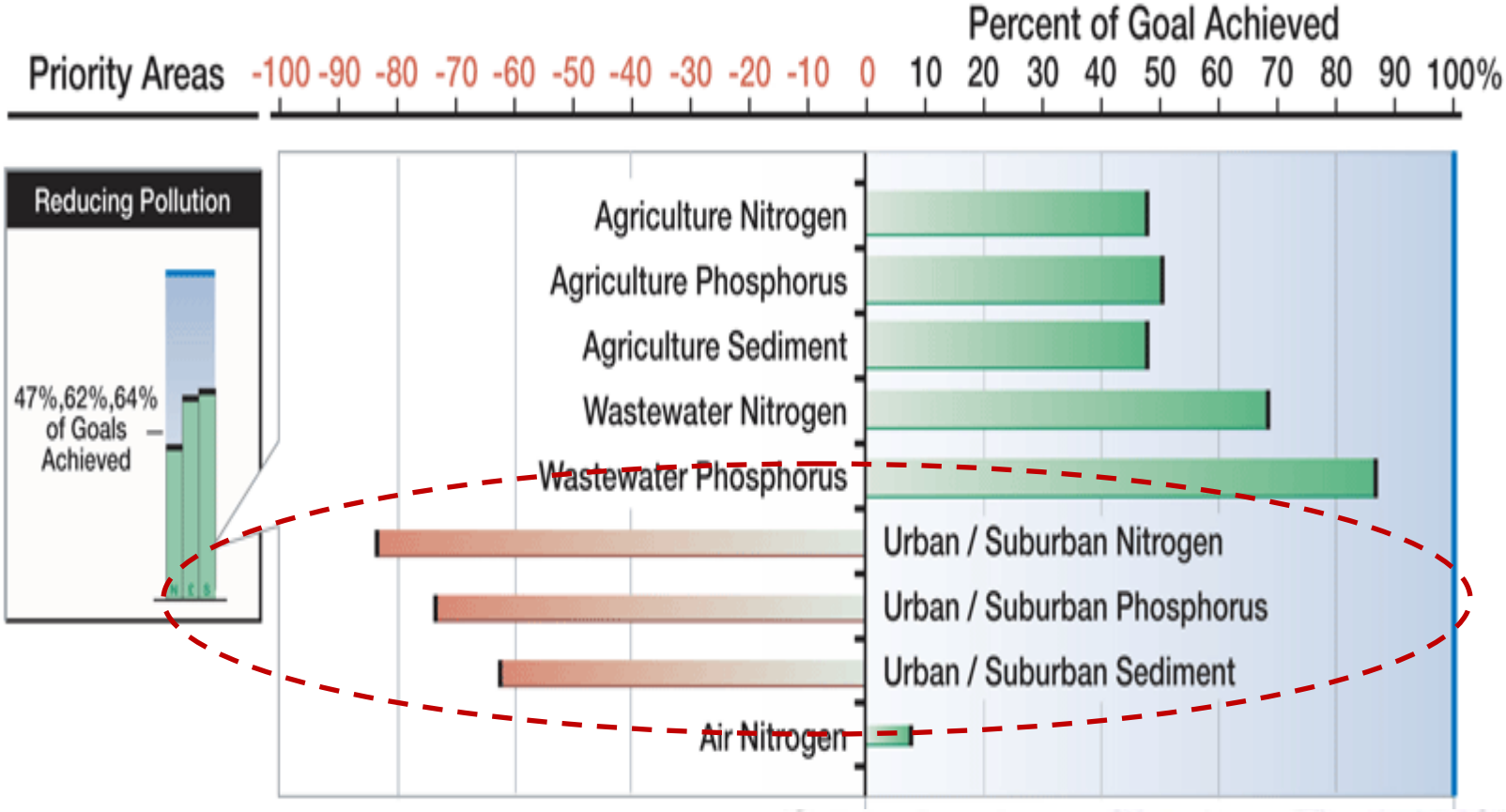
Source: CBP 2009

Health of the Chesapeake Bay



Health of the Chesapeake Bay

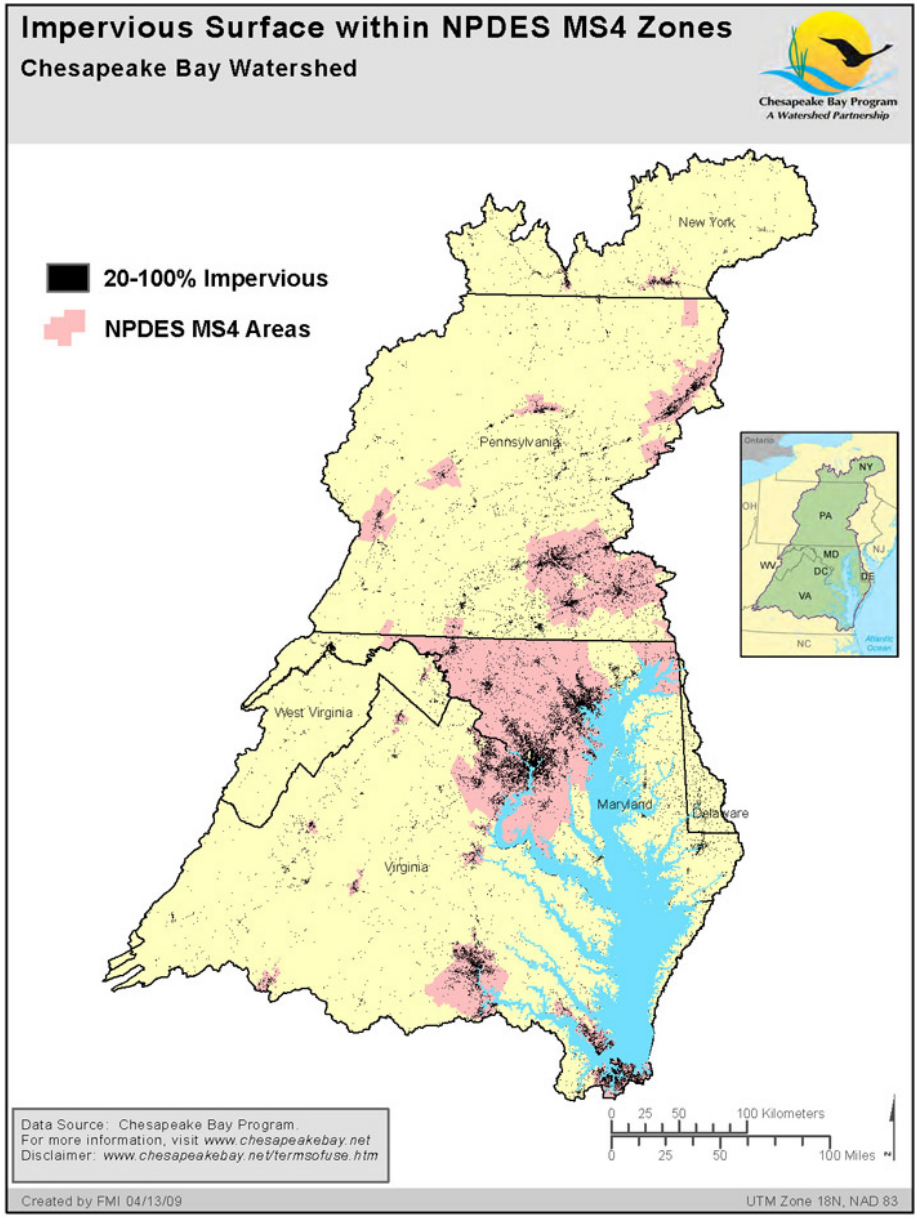
Urban/Suburban stormwater is the only pollution source* sector in the Bay watershed that is still growing



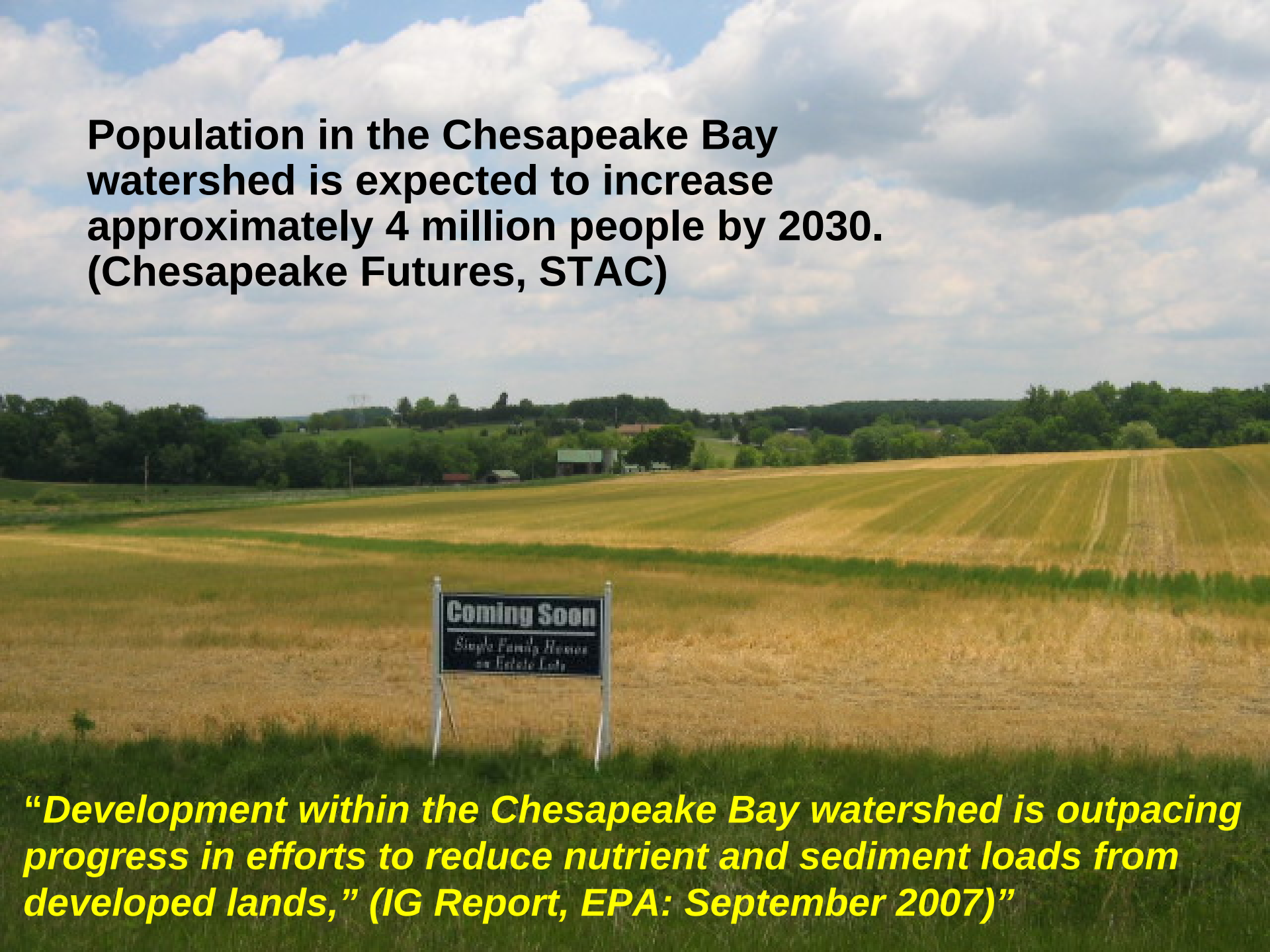
Source: Chesapeake Bay 2007 Health and Restoration Assessment (March 2008)

Some jurisdictions may be under reporting existing stormwater management practices

MS4 Coverage of the Chesapeake Watershed: 17%



Population in the Chesapeake Bay watershed is expected to increase approximately 4 million people by 2030. (Chesapeake Futures, STAC)



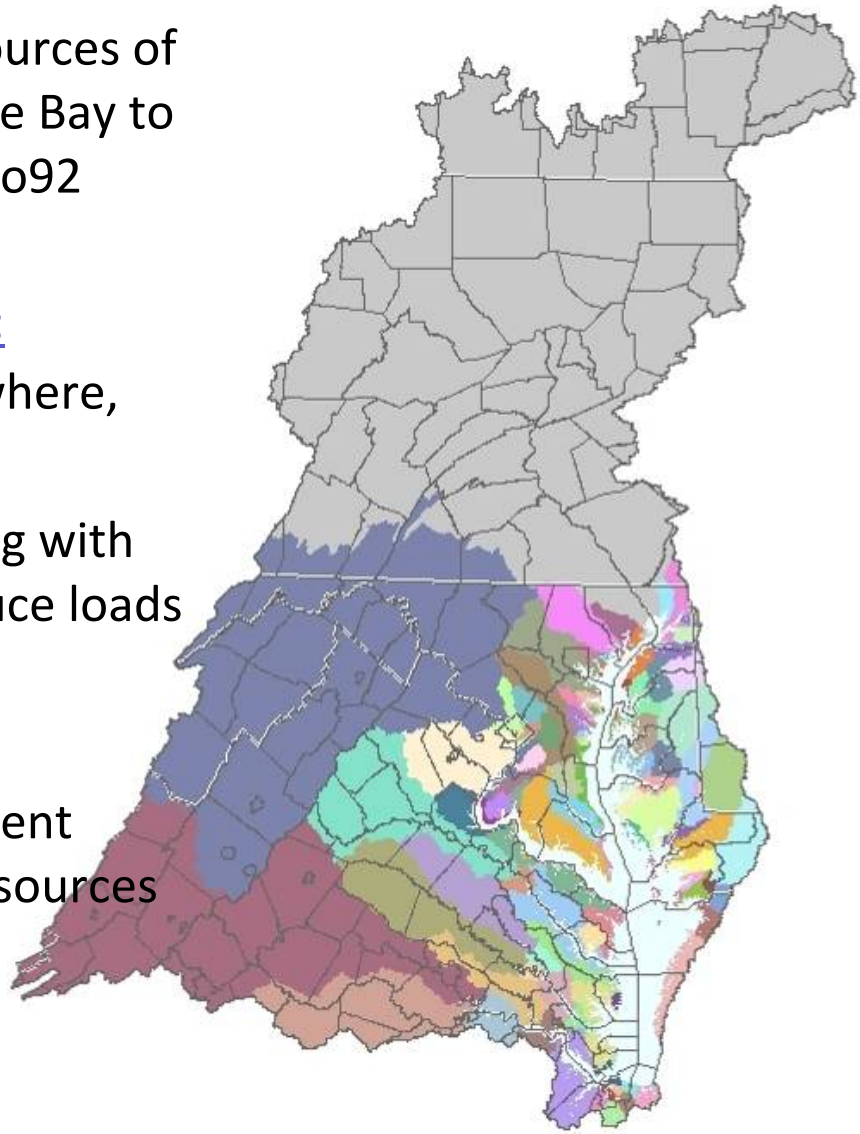
"Development within the Chesapeake Bay watershed is outpacing progress in efforts to reduce nutrient and sediment loads from developed lands," (IG Report, EPA: September 2007)"

Chesapeake Bay TMDL

Chesapeake Bay TMDL

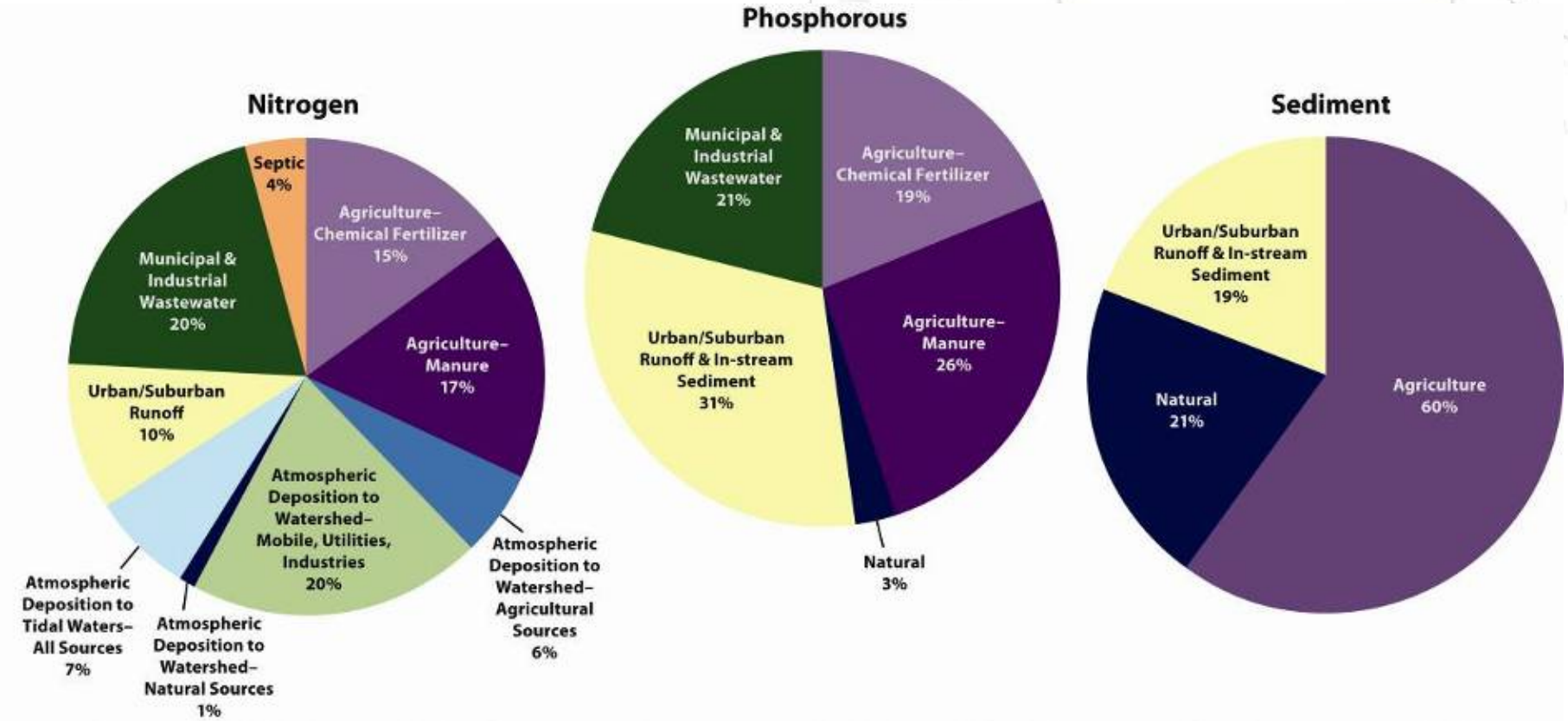
A New Accountability Framework

- TMDL: Set "pollution diet" or limits for sources of nitrogen, phosphorus and sediment to the Bay to meet water water quality standards (up to92 impaired segments)
- Watershed Implementation Plans (WIPs): States/DC describe what amount, how, where, and when.
- 2-Year Milestones: States and DC, working with local partners, implement actions to reduce loads
- Consequences: EPA evaluates plans and milestones and adopts as necessary
- Offsets/Trading: Support "net improvement offsets" to account for new or increased sources and trading to encourage partnerships



Main Sources of Pollution

- Agriculture – animal manure, commercial fertilizer
- Urban/suburban runoff – a growing problem
- Air pollution – tailpipes, power plants
- Wastewater – sewage treatment plants



Note: Does not include loads from tidal shoreline erosion or the ocean. Urban/suburban runoff loads due to atmospheric deposition are included under atmospheric deposition loads. Wastewater loads based on measured discharges; other loads are based on an average hydrology year using the Chesapeake Bay Program Airshed Model and Watershed Model Phase 4.3 (CBPO, 2009).

Target Pollutant Cap Loads by State

Nitrogen

State	2008 Load	Tributary Strategy	Target Load
DC	3.54	2.12	2.37
DE	9.91	6.43	5.25
MD	58.00	42.37	41.04
NY	16.71	8.68	10.54
PA	114.40	73.48	73.64
VA	72.82	56.75	59.21
WV	7.77	5.93	5.71
Total	283.15	195.75	197.76

Phosphorus

State	2008 Load	Tributary Strategy	Target Load
DC	0.14	0.10	0.13
DE	0.34	0.25	0.28
MD	3.10	2.54	3.04
NY	0.83	0.56	0.56
PA	3.99	3.10	3.16
VA	7.18	6.41	7.05
WV	0.70	0.43	0.62
Total	16.28	13.39	14.84

*** All loads are in millions of pounds per year**

Mandatory Pollution Diet at Work

Develop Watershed Implementation Plans

Establish Bay TMDL:

Set 2-Year Milestones

Monitor Progress

Employ Federal Actions or Consequences

Role of WIPs in Bay TMDL Development

Nov. - Dec. 2009

EPA sends Expectations letter to PSC

EPA sends Consequences letter to PSC

Major basin jurisdiction loading targets

Develop Ph. I WIP

Nov. 2009 – August 2010

Plan details into draft WLAs & LAs

Final TMDL Established

December 2010

Ph II WIP with local targets and controls

No later than November 2011

2-year milestones, reporting, modeling, monitoring

2012 – 2025

Watershed Implementation Plan Expectations

WIP Expectations:

- Interim and Final Target Loads
- Current Program Capacity
- Mechanisms to Account for Growth
- Gap Analysis
- Commitment to Fill Gaps: Policies, Rules, Dates for Key Actions
- Tracking and Reporting Protocols
- Contingencies for Failed, Delayed or Incomplete Implementation

Appendix with:

- Loads divided by tidal segment drainage area, source, and sector
- 2-year milestone loads by jurisdiction – EPA will use to assess milestones
- No later than November 2011: Update to include loads divided by local area and controls to meet 2017 interim target load

Source: November 4, 2009 “Expectations” letter to PSC

Federal Consequences

For failure to meet EPA expectations for Watershed Implementation Plans and 2-year milestones

Consequences could include:

- Expanding coverage of NPDES permits to sources that are currently unregulated
- Increasing oversight of state-issued NPDES permits
- Requiring additional pollution reductions from point sources such as wastewater treatment plants
- Increasing federal enforcement and compliance in the watershed
- Prohibiting new or expanded pollution discharges unless sufficient offsets are provided
- Conditioning or redirecting EPA grants
- Revising water quality standards to better protect local and downstream waters
- Other federal actions as authorized, including cooperation with DOT and USDA to consider additional actions

Funding and Technical Assistance

- **EPA will provide technical assistance and almost $12 million to state and local partners to help them meet EPA's expectations for the Bay TMDL through three efforts:**
  - Regulatory and Accountability Program grants
    - $11.2 million, to the 6 watershed states and the District of Columbia
  - Contractor support to states/DC for Watershed Implementation Plan development
    - Resources to support the development of Phase I & II of WIPs
    - Promoting "local implementation pilots"

Chesapeake Bay Executive Order

Executive Order Development

E.O. 13508, Section 203

- Purpose: ”to protect and restore the health, heritage, natural resources, and social and economic value of the nation s largest estuarine ecosystem and the natural sustainability of its watershed.

- Established the Federal Leadership Committee (FLC), chaired by EPA Administrator and including senior representatives of the departments of Agriculture, Commerce, Defense, Homeland Security, Interior and Transportation.

- The FLC is directed to prepare a coordinated implementation strategy of existing programs to protect and restore the Chesapeake Bay.

Executive Order Development

Accomplishments to Date

- Released seven draft reports, September 10, 2009
- Released draft strategy, November 9, 2009
- Announced $11.2 million in new state grant funds, December 29, 2009
- Outreach - Seven public forums throughout the watershed, webinar
- Planning Retreat for Federal Leadership Committee and State Secretaries held February 1-5

Executive Order Development

Section 202 Reports

Agencies developed recommendations on how to address seven challenges:

- Water quality
- Targeting of resources
- Stormwater management on federal land
- Climate change adaption
- Land conservation and public access
- Scientific tools and monitoring
- Protection of habitats, wildlife and fish

Draft section 202 reports were released September 10, 2010; Revised reports released November 24.

Draft Coordinated Implementation Strategy

Section 203 Draft Strategy – Released November 9

Initiatives support three major goals:

- Restore Clean Water
- Conserve Treasures Places and Habitats, Wildlife and Fish
- Adapt to the Impacts of Climate Change

Goals to be achieved by three approaches:

- Empower local efforts
- Decision-making through science
- New era of federal leadership

Key Provisions

- Fundamental shift from voluntary approach to more regulation.
- Regulatory authority will be expanded to increase accountability for pollution.
- Commitment to two-year milestones for all major actions
- Establish 2025 as year all mechanisms for a restored Bay will be in place
- Revisions to Goals, Milestones, and Indicators to be made by FLC and EC before May 2010

Executive Order

Public Comments – Key Themes

- Voluntary initiatives have not yielded necessary results.
- Strategy needs higher level of detail, bolder / game changing actions.
- Funding will be necessary for stakeholders to carry out proposed programs.
- Support for particular elements, e.g. Treasured Landscapes, Citizen stewardship, education, etc.
- Build on exisiting systems and more clearly consider integration of tools and initiatives developed by outside organizations.
- FLC must consider unintended adverse consequences resulting from actions (e.g, “do no harm”)
- Climate change should be considered throughout the strategy. Mitigation measures should be added.
- EPA has exceeded its statutory authority in the draft strategy.

Executive Order

Next Steps

- Goal and Performance Measure Framework – March 2010
- Final strategy to be issued in May 2010
- Annual action plan, October 2010
- Annual progress report (205) and enhanced Bay Barometer in 2011

Chesapeake Bay Regulatory Initiatives

The Old Storm Water Management View

"SW management is reflected by a complex system of conveyances used to collect and remove precipitation and resulting runoff from the site…"

—Water Pollution Control Textbook, Circa 1977

Proposed Regulations

Two new federal regulatory initiatives for the Chesapeake Bay watershed to:

- encourage and support alternative state regulatory actions;
- provide critical backstop measures to ensure accountability in state water quality efforts
- Announced by EPA Administrator Lisa Jackson, January 11

Regulatory changes will reset "performance expectations…"

- State stormwater rules
- National and Bay stormwater rule
- Evolution of NPDES permits
- CB TMDL-driven actions
- Section 438 – Energy Independence and Security Act

Proposed Regulations

Concentrated Animal Feeding Operations (CAFOs)

- A Chesapeake Bay-specific rulemaking to help achieve the objectives of the Bay TMDL.

- Under consideration:
  - expanding the universe of CAFOs
  - requiring more stringent permit standards to control nutrients
  - options to streamline the designation process
  - improve off-site manure management.

Proposed Regulations

Urban/Suburban Stormwater

- National rulemaking to control pollution from newly developed and redeveloped sites. Will serve as a critical backstop to ensure accountability in state water quality efforts.

- Under consideration:
  - Expand the universe of regulated discharges beyond urbanized area
  - Establish substantive post-construction requirements for new and redevelopment
  - Develop a single set of consistent requirements for all MS4s, in place of existing “Phase I” and “Phase II” rules
  - Address stormwater discharges from existing development through retrofitting
  - Consider additional requirements to further reduce stormwater impacts in the Chesapeake Bay
  - Buffer requirements
  - Additional requirements on active construction
  - Further extending area of coverage

Timeline for Stormwater Rulemaking

- Oct. 30, 2009 - **Federal Register (FR) notice (EPA–HQ–OW–2009–0817)** announcing EPA's intent to distribute questionnaires (Information Collection Request (ICR)) seeking data to inform the rulemaking from the following groups:
  - Owners, operators, developers, and contractors of developed sites
  - Owners or operators of MS4s
  - States and territories

- Jan. – Mar. 2010 – Listening Sessions input on preliminary rulemaking considerations (**FR Notice published Dec. 28, 2009, (EPA–HQ–OW–2009–0817)**)

- Spring 2010 – EPA expects to publish a final FR ICR notice with 30-day comment period and distribute questionnaires in the summer

- Late 2011 – EPA expects to propose a rule to be published in the FR for public comment

- Late 2012 – EPA expects to take final action

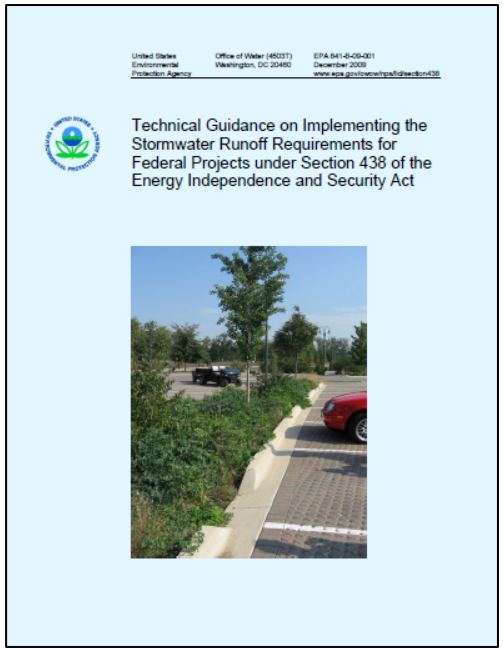
Trading/Offset Initiative (under TMDL)

- EPA is exploring the implementation of a program to offset pollution loads from new or expanding sources under the TMDL
- EPA would support state efforts and provide leadership on basin-wide trading as an option for achieving reductions at lower cost in the Bay watershed and implementing offsets for new and expanding discharges.
- Based on feedback from states and latest modeling results (showing increased opportunity to trade)

EISA 438 Guidelines

Energy Independence and Security Act (EISA)

- Section 438 – Requires federal agencies to maintain or restore the predevelopment hydrology of the site of any project with a footprint that exceeds 5,000 square feet.
- Predevelopment hydrology = runoff volume, rate, temperature, and duration of flow that typically existed on the site before human-induced land disturbance occurred.


United States Environmental Protection Agency
Office of Water (4503T) Washington, DC 20460
EPA 841-B-09-001 December 2009 www.epa.gov/owow/nps/lidsection438

Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act

Guidelines issued December 2009

- Focus on retaining rainfall through infiltration, evaporation/transpiration, and re-use.
- Compliance achieved using low impact stormwater management practices including: reducing impervious surfaces, vegetative practices, porous pavements, cisterns and green roofs.
- Two options to demonstrate compliance:

  1) manage total volume of rainfall from 95th percentile storm or 2) site-specific hydrologic analysis.

TMDL, EO and Regulations

Interrelationships and Opportunities

Common Elements	Bay TMDL	E.O.	New NPDES Regulations
TMDL sets nutrients and sediment cap	✓	Reference	Reference
Develop implementation plans to meet cap	✓	✓	
2-year milestones to assess progress	Reference	✓	
New or better use of federal tools and authorities	✓	✓	✓
Potential federal actions or consequences	Reference	✓	✓

Discussion

For more information visit:

Executive Order: http://executiveorder.chesapeakebay.net/
Chesapeake Bay TMDL: http://www.epa.gov/chesapeakebaytmdl/
Support: http://archive.chesapeakebay.net/pubs/WIP_Support_2_10ka.pdf